

Notice of Allowability

Application No.

10/620,841

Examiner

Donna V. Lui

Applicant(s)

HARKCOM ET AL.

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 16 July 2003.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Karl Koster on September 26, 2005.

The application has been amended and should read as follows:

Claim 20, line 1, The method of Claim 14, further comprising converting said ratio to a percentage.

Claim 23, line1, The method of Claim (14) 22, wherein said period of time is one minute.

Claim 24, line 1, A method of analyzing readings from a touch sensor to differentiate between noise and a presence of a human-intended activation of said touch sensor, said method comprising the steps of:

receiving a first group of sensor readings;

calculating an average reading of said first group;

receiving a second group of sensor readings;

calculating a deviation from said average reading of the first group for each sensor reading in said second group;

calculating a cumulative deviation for said second group;

obtaining a ratio of said cumulative deviation to a maximum value; and

indicating that said human-intended activation has occurred if:

said ratio meets or exceeds a threshold value; and
said threshold is met or exceeded within a predetermined number of
sensor readings.

Claim 25, line 1, The method of Claim 24, wherein the step of receiving a first group of
(four) sensor readings comprises receiving at least four sensor readings.

Allowable Subject Matter

2. Claims 1-36 are allowed.
3. The following is an examiner's statement of reasons for allowance: Claims 1 and 14 discloses a method of differentiating between an intended activation of a touch sensor and noise in a circuit, where a calculated deviation is added to a cumulative deviation tally and a ratio is obtained for the cumulative deviation to a scale. Claim 24 discloses calculating a deviation from an average reading of a first group for each sensor reading in a second group and calculating a cumulative deviation from the second group. Claim 30 discloses calculating an amount of deviation between a single touch sensor reading and an average sensor reading, adding the deviation to a cumulative deviation tally, and obtaining a ratio of the cumulative deviation tally to a scale. Claims 33 and 34 discloses the comparison of a ratio of a cumulative deviation of a plurality of DC voltage values from an average voltage value to a scale against a threshold value. The calculation of a deviation and the associated steps for further computations as disclosed in claims 1, 14, 24, 30, 33, and 34 as described by the inventors was not found in any prior art.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Although it is not prior art, examiner makes of record Gillespie et al. (Patent No.: US 6,380,931 B1) and Dotson (Pub. No.: US 2004/0196269 A1) as the closest art available. None of the prior art teaches or suggests the use of a calculated deviation for further computations and analysis for the derivation of sensor reading as recited in the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna V. Lui whose telephone number is (571) 272-4920. The examiner can normally be reached on Monday through Friday 8:30 a.m. - 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donna V Lui
Examiner
Art Unit 2675



KENT CHANG
PRIMARY EXAMINER